

REMARKS

Claims 14-16, 18-25, 33, 36-40, and 42-43 have been found to be allowable and the issue fee has been paid. Claims 14, 25, 33, and 43 have been amended. Claim 36 has been canceled. No new matter has been added. By way of the Petition to Withdraw from Issue submitted herewith, Applicants have requested that this application be withdrawn from issue so that a Request for Continued Examination, Information Disclosure Statement, and the Amendments and Remarks included herein may be considered. Applicants respectfully request entry of these amendments into the record and reconsideration of the claims.

Independent claim 14 and its dependent claims, unlike the cited references, include the step of infiltrating the impregnated green body with a liquid carbon precursor and pyrolyzing the liquid carbon precursor to form a carbon char. This step results in a composite material having less than 5 volume % residual silicon. As illustrated in Figure 9, an enlargement of which is attached at Tab A, the material of the present invention includes a minimal amount of free silicon (less than 5 volume %). The free silicon in the photomicrograph attached at Tab A is shown as white portions of the photomicrograph, examples of which are indicated by arrows on the photomicrograph. In contrast, materials such as those disclosed in Applicants' patent application serial number 09/676,250 (referred to throughout Applicants' specification and these Remarks as "co-pending application," although now abandoned) and in WO 02/28801, and illustrated in Figure 4, an enlargement of which is attached at Tab B, do not include the step of infiltrating the impregnated green body with a liquid carbon precursor and pyrolyzing the liquid carbon precursor to form a carbon char, and, therefore, contain a substantial

amount of residual silicon. Examples of such residual silicon are shown as light portions of the photomicrograph attached at Tab B and indicated by arrows in the photomicrograph.

Similarly, independent claims 25 and 43, and their dependent claims, unlike the cited references, are directed to a composite that contains a silicon carbide phase in which the silicon carbide in the silicon carbide phase is continuous and predominantly encompasses the fibrous structure, as shown in the photomicrograph attached at Tab A. In this photomicrograph, the silicon carbide is shown as the gray portions of the silicon carbide phase surrounding the white residual silicon portions that are indicated by the arrows. Applicants' claims require a composite material having less than 5 volume % residual silicon. In contrast, materials such as the material described in the co-pending application (and in WO 02/28801) and shown in the photomicrograph attached at Tab B, contain a substantial amount of residual silicon and, as a result, the silicon carbide phase does not contain silicon carbide "predominantly" encompassing the fibrous structure as required by the claims. Indeed, in the material described in the co-pending application, not only is there a substantial amount of residual silicon, but there is also only a small amount of silicon carbide present, and this silicon carbide does not "predominantly" encompass the fibrous structure. See "Preform Materials Tested" Table on page 20 of Applicants' specification (showing that the co-pending application contains less than 5 volume % silicon carbide, whereas the present invention contains 20-40 volume % silicon carbide).

Therefore, Applicants respectfully request that the subject application be deemed in condition for allowance. If, for any reason, the Examiner feels that the above

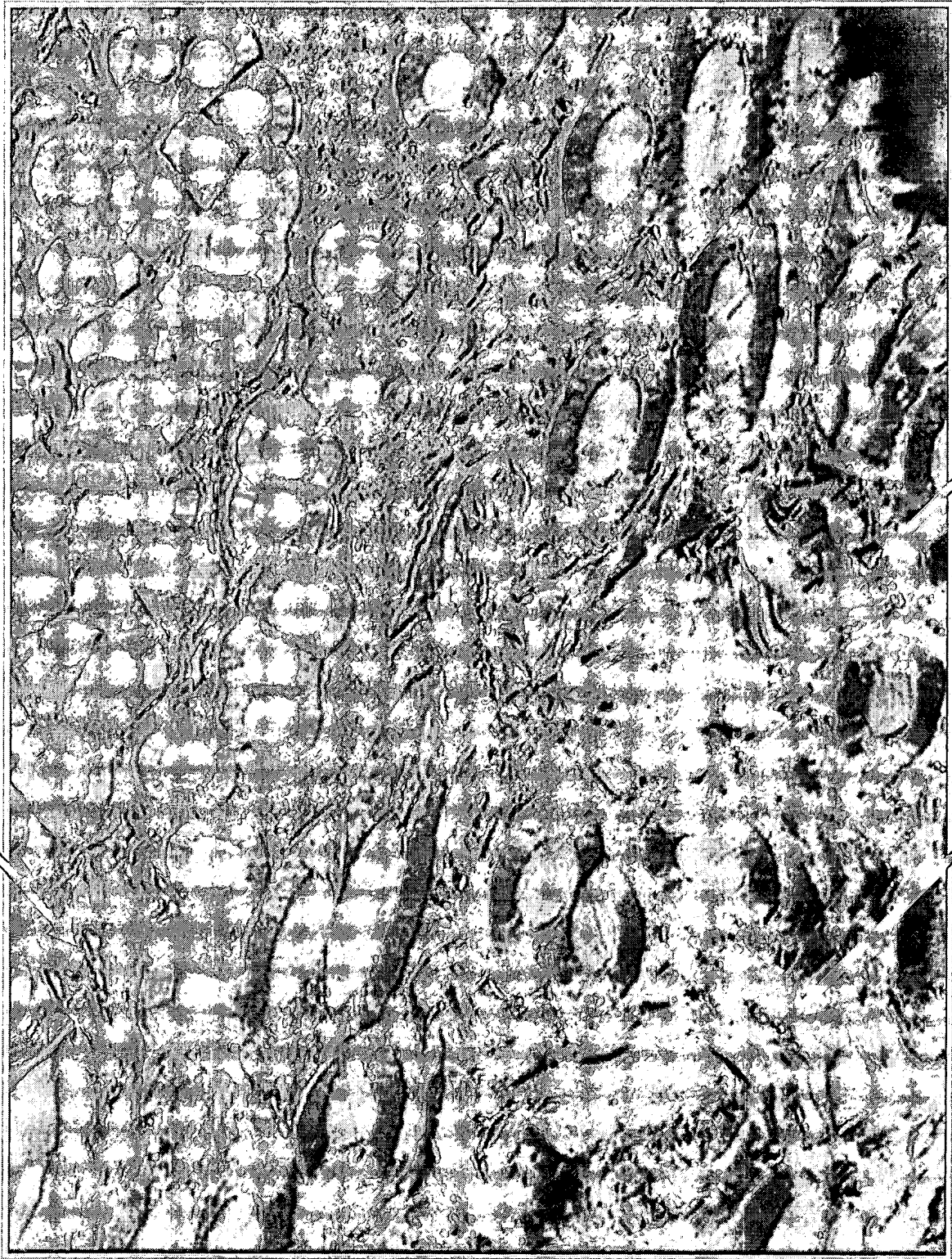
amendments and remarks do not put the claims in condition for allowance, he is requested to contact the undersigned attorney at (312) 222-8105 to resolve any remaining issues.

Respectfully submitted,

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TAB A



Residual Si

Residual Si

Residual Si

TAB B

